

	Division of Environmental Health and Communicable Disease Prevention	
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Mycobacterium Other Than Tuberculosis (MOTT)

Overview

For a more complete description of Mycobacterium other than Tuberculosis refer to the following texts:

- Control of Communicable Disease Manual (CCDM).
- Red Book, Report of the Committee on Infectious Diseases.

Case Definition

Clinical Description

Mycobacterium other than Tuberculosis that may cause human disease but do not cause tuberculosis.

Diagnostic Criteria of Nontuberculosis Mycobacterium Lung Disease in HIV-Seropositive and Seronegative Hosts.

The following criteria apply to symptomatic patients with a chest x-ray showing infiltrate, nodular or cavitory disease, or a high resolution computed tomography scan that shows multifocal bronchiectasis and/or multiple small nodules.

- A. If three sputum/bronchial wash results are available from the previous 12 mo:
 1. Three positive cultures with negative AFB smear results or
 2. Two positive cultures and one positive AFB smear
- B. If only one bronchial wash is available:
 1. Positive culture with a 2+, 3+, or 4+ AFB smear or 2+, 3+, or 4+ growth on solid media
- C. If sputum/bronchial wash evaluations are nondiagnostic or another disease cannot be excluded:
 1. Transbronchial or lung biopsy yielding a NTM or
 2. Biopsy showing mycobacterium histopathologic features (granulomatous inflammation and/or AFB) and one or more sputum or bronchial washings are positive for an NTM even in the numbers.

List of common mycobacterium:

M.avium, M. gordonae, M. fortuitum, M. kansasii, M. chelonae

Case classification

Confirmed: A clinically compatible illness that is culture confirmed.

Comments:

A patient that is positive with a MOTT infection can have a false positive PPD skin tests, since this preparation derived from M. tuberculosis, echoes a number of antigens with MOTT species.

MOTT infection is currently not reportable to CDC through MOHSIS.

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Information needed for Investigation

Many of these species are ubiquitous and are found in soil, food, water and animals, and are not generally considered to be contagious. Therefore, even though this is a reportable condition an investigation is not required.

Case Contact Follow-up and Control Measures

Control Measures

The only control measures are chemoprophylaxis for certain patients with HIV infection and use of sterile equipment for middle-ear instrumentation, including otoscopic equipment for prevention of Mabscesital otitis media. Sterile medical devices and nosocomial infection of MOTT may include infections of long-term intravenous or peritoneal catheters, post injection abscesses, or surgical wound infections such as those occurring after augmentation mammoplasty or cardiac bypass surgery.

Laboratory Procedures

Laboratory testing for mycobacterium other than tuberculosis (MOTT) is widely available through many private commercial reference laboratories. MOTTs are often isolated when testing for mycobacteria tuberculosis. The state health lab processes MOTTs at the TB State Health Lab in Mount Vernon, MO.

Reporting Requirements

Mycobacterium other than Tuberculosis is a category II disease and should be reported to the local health authority or to the Missouri Department of Health and Senior Services (MODHSS) within three (3) days of first knowledge or suspicion.

1. For all reported cases, complete a "Disease Case Report" (CD-1).
2. Send the completed form to the Regional Health Office.
3. All outbreaks or "suspected" outbreaks must be reported as soon as possible (by phone, fax, or e-mail) to the Regional Communicable Disease Coordinator. This can be accomplished by completing the Missouri Outbreak Surveillance Report (CD-51).
4. Within 90 days of the conclusion of an outbreak, submit the final outbreak report to the Regional Communicable Disease Coordinator.

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References

1. American Academy of Pediatrics. "Disease Caused by Non Tuberculosis Mycobacterium." In: Pickering LK, ed. 2000 Red Book: Report of the committee on Infectious Diseases. 25th ed. Elk Grove village, IL. 2000:613-618.
2. Chin, James, ed "Diseases due to Other Mycobacterium." Control of Communicable Disease Manual. 17th ed. Washington, DC: American Public Health Association, 2000: 530-532.
3. Center for Disease Control and Prevention. "Non Tuberculosis Mycobacterium"
4. National Jewish Medical and Research Center
"MEDFACTS – Non Tuberculosis Mycobacterium (NTM)"
5. ATS. "Diagnosis and Treatment of Disease caused by Nontuberculosis Mycobacterium"
American Journal Respiratory Critical Care Med. Vol. 156 pp. 51-525, 1997

Websites

1. Center for Disease Control and Prevention
http://www.cdc.gov/ncidod/dastlr/tb/tb_ntm.htm (June 03)
2. National Jewish Medical and Research Center
<http://nationaljewish.org/medfacts/nontuberculosis.html> (June 03)
3. American Thoracic Society www.thoracic.org/adobe/statements/nontuberc1-27.pdf (June 03)

Mycobacteria Other Than Tuberculosis (MOTT)

FACT SHEET

What is MOTT?

Mycobacteria other than tuberculosis are mycobacterial species that may cause human disease but do not cause tuberculosis. Every year in the United States approximately two people per 100,000 population develop infections caused by these lesser-known “cousins” of tuberculosis. In fact, data suggest that there may be rising numbers of cases in certain parts of the country.

How is MOTT spread?

Unlike tuberculosis, which is spread from person to person, MOTT infections are not considered contagious. There is no evidence that the infection can be transmitted from one person to another. Just how and why people become infected with MOTT is not clear.

What are the symptoms of MOTT?

Like tuberculosis, an MOTT infection primarily affects the lungs and the symptoms are similar. Most MOTT infections progress slowly. Symptoms may include:

- Fever
- Weight loss
- Cough
- Lack of appetite
- Night sweats
- Blood in the sputum (phlegm)
- Loss of energy

How is MOTT infection diagnosed?

MOTT infections can be more difficult to diagnose than tuberculosis. It is important for your health care provider to determine if the infection is tuberculosis or MOTT, and if MOTT, which specific type. In addition, it is important for the health care provider to determine whether the MOTT infection requires treatment. Some people harbor the germs and remain well. They may need observation but not specific treatment. Others have or may be developing serious and progressive illness. A diagnosis is generally based on the following:

- Medical history including your symptoms
- Chest X-ray
- Sputum culture – Several sputum cultures are often necessary and must be done at specialized laboratories.
- Other procedures – More complicated diagnostic procedures may be required in certain cases.

What is the treatment for MOTT infection?

Many MOTT infections are benign with no need for treatment. MOTT infections are naturally resistant to conventional antibiotics and it is necessary to use some of the same medications that are used to treat tuberculosis. In order to overcome drug resistance, the physician may be required to administer several different anti-TB medications at the same time. Because many of these medications have side effects, close monitoring is important. Furthermore, treatment may be necessary for as long as two years and sometimes indefinitely depending on the severity of the disease.

**Missouri Department of Health and Senior Services
Section for Communicable Disease Prevention
Phone: (866) 628-9891 or (573) 751-6113**



MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES
 Section for Communicable Disease Prevention
 930 Wildwood Drive, P.O. Box 570, Jefferson City, MO 65102-0570
 Telephone: (573) 751-6113 FAX: (573) 526-0235

DISEASE CASE REPORT

IF CONDITION IS SUSPECTED AS BEING RELATED TO A DELIBERATE ACT OR OUTBREAK, CALL THE MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES 24 HOURS A DAY, 7 DAYS A WEEK AT 1-800-392-0272

FOR PUBLIC HEALTH AGENCY USE ONLY	
CONDITION I.D.	PARTY I.D.
OUTBREAK I.D.	DATE RECEIVED BY LPHA
JURISDICTION	

Patient Information	NAME (LAST, FIRST, M.I.)		PATIENT IDENTIFIER		DATE OF BIRTH	AGE	MARITAL STATUS	SEX <input type="checkbox"/> Male <input type="checkbox"/> Female	
	PATIENT'S COUNTRY OF ORIGIN		DATE ARRIVED IN USA	OCCUPATION		RACE/ETHNICITY (CHECK ALL THAT APPLY) <input type="checkbox"/> AMERICAN INDIAN <input type="checkbox"/> PACIFIC ISLANDER <input type="checkbox"/> UNKNOWN <input type="checkbox"/> ASIAN <input type="checkbox"/> WHITE <input type="checkbox"/> BLACK <input type="checkbox"/> OTHER RACE - Specify: _____ HISPANIC: <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNK			
	HOME TELEPHONE		WORK TELEPHONE	PARENT OR GUARDIAN					
	IS PERSON HOMELESS? <input type="checkbox"/> YES <input type="checkbox"/> NO	ADDRESS		CITY, STATE, ZIP CODE			COUNTY OF RESIDENCE		
WAS PATIENT HOSPITALIZED? <input type="checkbox"/> YES <input type="checkbox"/> NO	IF YES, NAME OF HOSPITAL		HOSPITAL ADDRESS		CITY, STATE, ZIP CODE		HOSPITAL TELEPHONE		
Reporter	REPORTER NAME (Form Completed By)		REPORTING FACILITY		REPORTER ADDRESS		CITY, STATE, ZIP CODE		
	TYPE OF REPORTING FACILITY <input type="checkbox"/> PHYSICIAN <input type="checkbox"/> OUTPATIENT CLINIC <input type="checkbox"/> HOSPITAL <input type="checkbox"/> LABORATORY <input type="checkbox"/> SCHOOL <input type="checkbox"/> OTHER: _____		DATE OF REPORT	PHYSICIAN/CLINIC NAME		PHYSICIAN/CLINIC TELEPHONE		HAS PATIENT BEEN NOTIFIED OF DIAGNOSIS/LAB RESULTS? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNK	
			PHYSICIAN/CLINIC ADDRESS		CITY, STATE, ZIP CODE				
Risk/Background Information	PREGNANT <input type="checkbox"/> YES - DUE DATE: _____ <input type="checkbox"/> NO <input type="checkbox"/> UNK		OTHER ASSOCIATED CASES? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNK		RECENT TRAVEL OUTSIDE OF IMMEDIATE AREA? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNK		DATE OF DEPARTURE	DATE OF RETURN	TRAVEL LOCATION
	CHECK BELOW IF PATIENT OR MEMBER OF PATIENT'S HOUSEHOLD (HHL):		PATIENT		HHL MEMBER			IF YES, PROVIDE BUSINESS NAME, ADDRESS AND TELEPHONE NUMBER	
	IS A FOOD HANDLER?		YES	NO	UNK	YES	NO	UNK	
	ASSOCIATED WITH OR ATTENDS CHILD/ ADULT CARE CENTER?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ASSOCIATED WITH OR RESIDENT OF NURSING HOME?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ASSOCIATED WITH OR INMATE OF CORRECTIONAL FACILITY?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ASSOCIATED WITH HOMELESS SHELTER?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IS A STUDENT OR FACULTY/STAFF OF A SCHOOL?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
IS A HEALTH CARE WORKER?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
OTHER (specify): _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
HAS PATIENT DONATED OR RECEIVED BLOOD OR TISSUE?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DATE DONATED	DATE RECEIVED	SPECIFY TYPE OF BLOOD OR TISSUE AND FACILITY NAME/ADDRESS		
Disease	DISEASE/CONDITION NAME(S)		ONSET DATE(S)		DIAGNOSIS DATE(S)		SEVERITY OF VARICELLA <input type="checkbox"/> <50 lesions <input type="checkbox"/> 50-249 lesions <input type="checkbox"/> 250-500 lesions <input type="checkbox"/> >500 lesions		
							VACCINATION HISTORY FOR REPORTED CONDITION/DATES <input type="checkbox"/> UNKNOWN		
Symptoms	SYMPTOM	SYMPTOM SITE	ONSET DATE (MO/DAY/YR)	DURATION (DAYS)	DID PATIENT DIE OF THIS ILLNESS? <input type="checkbox"/> YES <input type="checkbox"/> NO - IF YES, GIVE DATE: _____				
					COMMENTS				
Diagnostics	DO NOT COMPLETE DIAGNOSTICS IF LAB SLIP IS ATTACHED								
	RESULT DATE (MO/DAY/YR)	TYPE OF TEST	SPECIMEN TYPE/SOURCE	SPECIMEN DATE (MO/DAY/YR)	QUALITATIVE/QUANTITATIVE RESULTS	REFERENCE RANGE	LABORATORY NAME/ADDRESS (STREET, or RFD, CITY, STATE, ZIP CODE)	LIVER FUNCTION RESULTS	
								ALT	
								AST	
Treatment	TYPE OF TREATMENT (MEDS) IF NOT TREATED, REASON	DOSAGE	TREATMENT START DATE (MO/DAY/YR)	TREATMENT END DATE (MO/DAY/YR)	TREATMENT DURATION (IN DAYS)	PREVIOUS MEDICATIONS USED FOR TREATMENT	PREVIOUS TREATMENT FACILITY	TELEPHONE NUMBER	

NOTES FOR ALL RELEVANT SECTIONS

- For cases of varicella, complete only the data fields for the patient's: Name, Date of Birth, County of Residence, Date of Report, Other Associated Cases, Disease/Condition Name(s), Onset Date, Severity of Varicella, Vaccination History for Reported Condition/Dates, and Did Patient Die Of This Illness; if diagnostic test(s) were performed - provide Lab Slip.
- Do not use this form to report weekly aggregate influenza incidence.
- Risk factors, diagnostics, treatments, and symptoms shown below are examples. To see a list of communicable disease resources available online, go to <http://www.dhss.mo.gov/CommunicableDisease/>. For additional information or to report a case of a reportable disease/condition, you may also contact the Office of Surveillance at 1-866-629-9891.
- All dates must be in MONTH/DAY/YEAR (01/01/2005) format.
- To be complete, all addresses should include the city, state, and zip code.
- All telephone numbers should include the area code.

PATIENT INFORMATION

- Name: Provide the patient's full name, including the full first name.
- Patient Identifier: Provide patient's SSN, medical record, inmate, DCN, or other identifying number and indicate identifier provided.
- Age: If the patient is less than one year, provide patient age in months; or if less than one month, provide patient age in days.
- Race/ethnicity: Patient race/ethnicity is determined by the self-identification of each patient.
- Date arrived in USA: Do not complete this data field for those patients who were born in the United States as an American citizen.
- Address: If homeless, check the appropriate box and provide an address where the patient can be located (i.e., shelter, etc.).
- Patient hospitalized: Indicate if the patient was hospitalized due to the reported disease/condition.

REPORTER

- Reporter name (Form completed by): Provide the name of the individual who completed this form.
- Reporting facility: Provide the name of the facility where the Reporter is employed. Facilities include hospital, physician, local public health agency, etc.
- Date of report: Provide the date the form was submitted by the Reporter.

RISK/BACKGROUND INFORMATION

- Associated cases: Indicate if other cases (individuals with similar symptoms) are associated with the patient's disease/condition.
- Other risk/background information may include environmental exposure or exposure due to animals, recreation, and occupation.

DISEASE

- Disease name(s): Specify the disease(s)/condition(s) that is reported on this form, as listed in [19 CSR 20-20.020](#) Reporting Communicable, Environmental and Occupational Diseases – Sections (1) and (2).
- Onset date: Indicate the date when the symptoms started.
- Diagnosis date: Indicate the date when a physician diagnosed the disease/condition.
- Severity of varicella: Indicate the estimated number of skin lesions on the patient's total body surface.
- Vaccination history: Provide the vaccination history for the disease/condition, including vaccine type and manufacturer.

SYMPTOMS

- Symptom: Indicate the symptom(s) associated with the disease/condition. Symptoms may include jaundice, fever, headache, rash, lesion, discharge, etc.
- Onset date: Indicate the date when each symptom started.
- Pertinent information: Provide any additional symptoms-related comments. Attach additional sheets if more space is needed.

DIAGNOSTICS - Please attach a copy of all lab results. Do not complete this section if lab results are attached.

- Result date: Indicate the date that each laboratory result was reported, usually to the submitting physician, clinic, etc.
- Type of test: Indicate each type of test performed. Examples of tests are carboxyhemoglobin, chest x-ray, culture, EIA, gram stain, ICP/MS, PCR, RBC/Serum Cholinesterase, RPR, serum organochlorine panel, etc.
- Specimen type/source: Indicate the specimen type/source for each test. Examples of specimen types are blood, cerebrospinal fluid (CSF), hair, nails, smear, stool, urine, etc.
- Specimen date: Indicate the collection date for each specimen.
- Qualitative/quantitative results: Indicate the result for each test.
 - Examples of qualitative results are positive, reactive, negative, equivocal, undetectable, etc.
 - Examples of quantitative results are 1:16, 2.0 mm, 2000 IU/mL, 65 mcg/dL, 1.8 IV, 10 ppb, index value, etc.
 - Examples of quantitative results for tuberculosis when administering the Mantoux test - (PPD), indicate the diameter of the induration (i.e., 2 mm, 15 mm, etc.).
- Reference range: Indicate the reference range for each quantitative result. Examples of reference ranges are: <1:10, <600 IU/mL, 1:64, <10 mcg/dL, etc.
- Liver function results: ALT = alanine aminotransferase (SGPT); AST = aspartate aminotransferase (SGOT)

TREATMENT

- Type of treatment: Indicate the medication(s) and/or therapy(ies) prescribed for treatment of the disease(s)/condition(s).
 - Reasons for not treating include – but are not limited to – 'False Positive', 'Previously Treated', and 'Age'.
- Dosage: Indicate the number of units (i.e., 50, 500, etc.), measurement (i.e., cc, mg, etc.), and number of times taken each day and/or week for each medication.